

indy.ST25.txt
SEQUENCE LISTING

<110> University of Connecticut

Helfand, Stephan L

Reenan, Robert A

Rogina, Blanka

<120> Polynucleotides Encoding Cellular Transporters and Methods of Use Thereof

<130> UCT-0020

<150> 60/255,013

<151> 2000-12-12

<160> 2

<170> PatentIn version 3.1

<210> 1

<211> 1719

<212> DNA

<213> Drosophila melanogaster

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<221> CDS

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<301> Blanka Rogina, Robert A. Reenan, Steven P. Nilsen and Stephen L. Helfand

<302> Extended Life-Span Conferred by Cotransporter Gene Mutations in Drosophila

<303> Science

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<306> 2137-2140

<307> 2000-12-15

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aac	ttc	ttc	gct	aac	cac	tgg	aag	gga	ttg	gtt	gtg	ttc	ctg	gtg	ccg	96
Asn	Phe	Phe	Ala	Asn	His	Trp	Lys	Gly	Leu	Val	Val	Phe	Leu	Val	Pro	
			20					25					30			

ctg	cta	tgt	ctg	cct	gtt	atg	ctg	cta	aac	gaa	ggc	gcc	gaa	ttt	cgg	144
Leu	Leu	Cys	Leu	Pro	Val	Met	Leu	Leu	Asn	Glu	Gly	Ala	Glu	Phe	Arg	
		35					40					45				

tgc	atg	tac	ctc	ctt	ttg	gta	atg	gcc	ata	ttt	tgg	gtt	acg	gaa	gcc	192
Cys	Met	Tyr	Leu	Leu	Leu	Val	Met	Ala	Ile	Phe	Trp	Val	Thr	Glu	Ala	
	50					55					60					

ttg	cct	ctc	tat	gtg	acg	tcc	atg	ata	ccg	att	gtg	gcc	ttc	cca	ata	240
Leu	Pro	Leu	Tyr	Val	Thr	Ser	Met	Ile	Pro	Ile	Val	Ala	Phe	Pro	Ile	
65					70					75					80	

atg	ggg	ata	atg	agc	tcg	gat	cag	act	tgc	cgc	ttg	tac	ttc	aag	gat	288
Met	Gly	Ile	Met	Ser	Ser	Asp	Gln	Thr	Cys	Arg	Leu	Tyr	Phe	Lys	Asp	
				85					90					95		

acg	ctg	gtg	atg	ttc	atg	ggc	ggc	att	atg	gtc	gcc	ctg	gct	gtg	gag	336
Thr	Leu	Val	Met	Phe	Met	Gly	Gly	Ile	Met	Val	Ala	Leu	Ala	Val	Glu	
			100					105					110			

tac	tgt	aat	cta	cac	aaa	cgt	ctt	gcc	ttg	agg	gta	atc	cag	atc	gtg	384
Tyr	Cys	Asn	Leu	His	Lys	Arg	Leu	Ala	Leu	Arg	Val	Ile	Gln	Ile	Val	
		115					120					125				

ggc	tgc	agt	ccc	cgc	aga	tta	cac	ttt	ggc	ctc	atc	atg	gtt	aca	atg	432
Gly	Cys	Ser	Pro	Arg	Arg	Leu	His	Phe	Gly	Leu	Ile	Met	Val	Thr	Met	
	130					135					140					

ttt	ttg	agc	atg	tgg	att	tcg	aac	gcc	gcc	tgt	act	gcc	atg	atg	tgt	480
Phe	Leu	Ser	Met	Trp	Ile	Ser	Asn	Ala	Ala	Cys	Thr	Ala	Met	Met	Cys	
145					150					155					160	

ccg	att	atc	caa	gcc	gtg	ctg	gag	gag	ctg	cag	gct	cag	ggg	gtc	tgc	528
Pro	Ile	Ile	Gln	Ala	Val	Leu	Glu	Glu	Leu	Gln	Ala	Gln	Gly	Val	Cys	
				165					170					175		

aaa	atc	aac	cat	gag	cct	caa	tac	caa	atc	gtt	gga	ggc	aac	aag	aaa	576
Lys	Ile	Asn	His	Glu	Pro	Gln	Tyr	Gln	Ile	Val	Gly	Gly	Asn	Lys	Lys	
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435	440	445	
gtc atc ctg gtg gct gtg ttc ctg acc gcc ttc agc tcc aat gtg gcg Val Ile Leu Val Ala Val Phe Leu Thr Ala Phe Ser Ser Asn Val Ala 450 455 460			1392
att gcc aac att att att ccc gtt ctg gcc gag atg tcc ctg gcc att Ile Ala Asn Ile Ile Ile Pro Val Leu Ala Glu Met Ser Leu Ala Ile 465 470 475 480			1440
gag atc cat cct ctg tac ctg atc ctg ccc gct ggc ttg gcc tgc agt Glu Ile His Pro Leu Tyr Leu Ile Leu Pro Ala Gly Leu Ala Cys Ser 485 490 495			1488
atg gcc ttc cac ctg ccg gtt agt act ccg ccc aac gct ttg gtt gct Met Ala Phe His Leu Pro Val Ser Thr Pro Pro Asn Ala Leu Val Ala 500 505 510			1536
ggc tat gcc aac att agg acg aag gac atg gcc att gct gga atc ggt Gly Tyr Ala Asn Ile Arg Thr Lys Asp Met Ala Ile Ala Gly Ile Gly 515 520 525			1584
ccg acc atc att acc atc atc acc ctg ttt gtt ttc tgc caa acc tgg Pro Thr Ile Ile Thr Ile Ile Thr Leu Phe Val Phe Cys Gln Thr Trp 530 535 540			1632
ggc ctg gtt gtc tat ccg aac ctt aac tcg ttc ccc gaa tgg gct cag Gly Leu Val Val Tyr Pro Asn Leu Asn Ser Phe Pro Glu Trp Ala Gln 545 550 555 560			1680
att tat gcc gcg gca gca ctg gga aac aag acg cac tag Ile Tyr Ala Ala Ala Ala Leu Gly Asn Lys Thr His 565 570			1719

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<213> Drosophila melanogaster

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Asn	Phe	Phe	Ala	Asn	His	Trp	Lys	Gly	Leu	Val	Val	Phe	Leu	Val	Pro
			20					25					30		
Leu	Leu	Cys	Leu	Pro	Val	Met	Leu	Leu	Asn	Glu	Gly	Ala	Glu	Phe	Arg
		35					40					45			
Cys	Met	Tyr	Leu	Leu	Leu	Val	Met	Ala	Ile	Phe	Trp	Val	Thr	Glu	Ala
50						55					60				

Leu Pro Leu Tyr Val Thr Ser Met Ile Pro Ile Val Ala Phe Pro Ile
65 70 75 80

Met Gly Ile Met Ser Ser Asp Gln Thr Cys Arg Leu Tyr Phe Lys Asp
85 90 95

Thr Leu Val Met Phe Met Gly Gly Ile Met Val Ala Leu Ala Val Glu
100 105 110

Tyr Cys Asn Leu His Lys Arg Leu Ala Leu Arg Val Ile Gln Ile Val
115 120 125

Gly Cys Ser Pro Arg Arg Leu His Phe Gly Leu Ile Met Val Thr Met
130 135 140

Phe Leu Ser Met Trp Ile Ser Asn Ala Ala Cys Thr Ala Met Met Cys
145 150 155 160

Pro Ile Ile Gln Ala Val Leu Glu Glu Leu Gln Ala Gln Gly Val Cys
165 170 175

Lys Ile Asn His Glu Pro Gln Tyr Gln Ile Val Gly Gly Asn Lys Lys
180 185 190

Asn Asn Glu Asp Glu Pro Pro Tyr Pro Thr Lys Ile Thr Leu Cys Tyr
195 200 205

Tyr Leu Gly Ile Ala Tyr Ala Ser Ser Leu Gly Gly Cys Gly Thr Ile
210 215 220

Ile Gly Thr Ala Thr Asn Leu Thr Phe Lys Gly Ile Tyr Glu Ala Arg
225 230 235 240

Phe Lys Asn Ser Thr Glu Gln Met Asp Phe Pro Thr Phe Met Phe Tyr
245 250 255

Ser Val Pro Ser Met Leu Val Tyr Thr Leu Leu Thr Phe Val Phe Leu
260 265 270

Gln Trp His Phe Met Gly Leu Trp Arg Pro Lys Ser Lys Glu Ala Gln
275 280 285

Glu Val Gln Arg Gly Arg Glu Gly Ala Asp Val Ala Lys Lys Val Ile
290 295 300

Asp Gln Arg Tyr Lys Asp Leu Gly Pro Met Ser Ile His Glu Ile Gln
305 310 315 320

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Val Met Ile Leu Phe Ile Phe Met Val Val Met Tyr Phe Thr Arg Lys
325 330 335

Pro Gly Ile Phe Leu Gly Trp Ala Asp Leu Leu Asn Ser Lys Asp Ile
340 345 350

Arg Asn Ser Met Pro Thr Ile Phe Val Val Val Met Cys Phe Met Leu
355 360 365

Pro Ala Asn Tyr Ala Phe Leu Arg Tyr Cys Thr Arg Arg Gly Gly Pro
370 375 380

Val Pro Thr Gly Pro Thr Pro Ser Leu Ile Thr Trp Lys Phe Ile Gln
385 390 395 400

Thr Lys Val Pro Trp Gly Leu Val Phe Leu Leu Gly Gly Gly Phe Ala
405 410 415

Leu Ala Glu Gly Ser Lys Gln Ser Gly Met Ala Lys Leu Ile Gly Asn
420 425 430

Ala Leu Ile Gly Leu Lys Val Leu Pro Asn Ser Val Leu Leu Val
435 440 445

Val Ile Leu Val Ala Val Phe Leu Thr Ala Phe Ser Ser Asn Val Ala
450 455 460

Ile Ala Asn Ile Ile Ile Pro Val Leu Ala Glu Met Ser Leu Ala Ile
465 470 475 480

Glu Ile His Pro Leu Tyr Leu Ile Leu Pro Ala Gly Leu Ala Cys Ser
485 490 495

Met Ala Phe His Leu Pro Val Ser Thr Pro Pro Asn Ala Leu Val Ala
500 505 510

Gly Tyr Ala Asn Ile Arg Thr Lys Asp Met Ala Ile Ala Gly Ile Gly
515 520 525

Pro Thr Ile Ile Thr Ile Ile Thr Leu Phe Val Phe Cys Gln Thr Trp
530 535 540

Gly Leu Val Val Tyr Pro Asn Leu Asn Ser Phe Pro Glu Trp Ala Gln
545 550 555 560

Ile Tyr Ala Ala Ala Leu Gly Asn Lys Thr His
565 570

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